

Knowledge, Attitude and Practice towards *Human Immunodeficiency Virus* Infection among University Freshmen Students Year 2016/2017

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Abstract

Background: *Human Immunodeficiency Virus* (HIV) infection is one of the most serious public health and social problems in the world. Transmission of HIV occurs in the age group of 20 years or below. One of the ways to prevent HIV transmission is to improve the knowledge so the attitude and practice can be changed. The objectives of this study was to identify the knowledge, attitude, and practice of HIV infection among university freshmen students year 2016/2017.

Methods: This was a descriptive cross sectional quantitative study. Samples were selected using proportional random sampling and primary data were collected using questionnaires which were self-completed by 122 Universitas Padjadjaran freshmen students year 2016/2017 in November 2016. Questionnaire consisted of sociodemographic, knowledge, attitude, and practice data regarding to HIV infection. The collected data was analyzed and presented in the form of tables and figure.

Results: Respondents had a median age criterion of 18 years, 52.5% were female, 73.8% high school originated outside Bandung and 19.4% knew information about HIV/AIDS through the internet. There were 18.9% of the respondents classified as having "Good" knowledge, 63.9% classified as "Satisfactory" and the other 17.2% were classified as having "Poor" knowledge of HIV. There were 52.5% respondents who had negative attitude towards HIV discussion and 96.7% of the respondents had good practice.

Conclusions: Lack of knowledge and negative attitude towards HIV infection and the presence of high risk practice for HIV infection demanded that students should receive reproduction health education to support the prevention of HIV infection.

Keywords: Attitude, HIV, knowledge, practice

Introduction

Human Immunodeficiency Virus (HIV) infection continues to be a major global public health issue.¹ According to the United Nations Program on HIV/AIDS (UNAIDS), there were approximately 36.7 million people living with HIV at the end of 2016 with 1.8 million people becoming newly infected in 2016 globally.¹ In Indonesia, based on Progress Report of HIV/AIDS Quarter 4 of 2015 by Directorate General of Disease Control and Environmental Health, HIV infection and AIDS have spread in 407 out of 507 districts/cities in all provinces with a total of 30,935 cases and West Java ranked fourth with most HIV cases among all provinces.²

Acquired Immune Deficiency Syndrome (AIDS) is most frequently found on people from age group 20-29 years with incidence rate of 31.8%; this result showed that HIV transmission most frequently occur on age group of <20 years.² Lack of correct health information and limited access to reproductive health service cause adolescents to be very prone towards HIV infection.³ Preventive approaches become very important, especially through health education and health upgrading about HIV among young adults. With adequate knowledge and attitude, someone will behave well, hence avoid behavior that increase the risk of HIV/AIDS.⁴ Based on these elaborations, the objectives of this study was to identify the knowledge, attitude and practice towards HIV

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infection among university freshmen students of Universitas Padjadjaran (Unpad) year 2016/2017.

Methods

This was a descriptive cross-sectional study. This study had been permitted by Health Research Ethics Committee Faculty of Medicine Universitas Padjadjaran with letter number 651/UN6.C1.3.2/KEPK/PN/2016 and by Rectorate of Universitas Padjadjaran with letter number 654/UN6.BAA/PP/2016. The study populations were students of Universitas Padjadjaran with estimated 27,983 students.

The subjects in this study were freshmen students of Universitas Padjadjaran year 2016/2017 with estimated 6,148 students. Samples were selected using proportional random sampling and sample size was determined using Slovin formula with subject of 6,148 people and study precision of 9%, hence the required sample was 122. Data collection was conducted on November 1–8, 2016 at Jatinangor Campus, Universitas Padjadjaran. Inclusion criteria of this study were enrolled as new Unpad student year 2016/2017, fluent in Indonesian, and had agreed to sign informed consent form. Exclusion criterion of this study was students who did not fill questionnaire completely.

Instrument used in this study was questionnaire that had been modified and re-validated from a previous study conducted in 2011 at Ethiopia by Shiferaw et al.⁵ Alpha Cronbach value from knowledge questionnaire validation result was 0.84 and 0.56 for attitude questions. Questionnaire validation test was conducted on 30 freshmen students of Universitas Padjadjaran year 2016/2017. Study data used in this study were primary data collected by self-administered questionnaire by respondents. This questionnaire contained sociodemographic data of freshmen students including age, sex, high school origin, faculty and source of information about HIV/AIDS. Knowledge questionnaire consisted of 20 questions with right or false options; aspect included knowledge about etiology, HIV transmission and early HIV symptoms. Attitude questionnaire consisted of 10 questions with Likert scale option (strongly agree, agree, doubtful, disagree, and strongly disagree); aspect included attitude of freshmen towards HIV transmission, attitude towards people with HIV infection and the need of program about prevention of HIV infection. Practice questionnaire consisted of 5 questions with

yes or no option; aspect included high risk behavior for HIV transmission.

The collected data were processed and analyzed using computer statistic software, then presented in terms of tables and figures. Numerical variables were presented in form of median data and minimum-maximum value. Categorical variables were presented in distribution of frequency (n) and percentage (%). Knowledge level of this study referred to interquartile range value; result score of >13 was classified as "Good", score of 7 – 13 was classified as "Satisfactory" and score <7 was classified as "Poor". Attitude of freshmen was classified as positive or negative attitude; if result score \geq median score, respondents were considered having positive attitude and if result score < median, respondents were considered having negative attitude. Practice was classified into good or bad behavior; if respondent answered yes to at least 1 question, the practice was considered bad.

Results

The median age of the 122 respondents in this study was 18 years with 16 years the youngest and 20 years the oldest. There were 52.5% female respondents and 47.5% male, high school origin was mostly (73.8%) from outside Bandung and 26.2% from Bandung. All students had heard about HIV infection, 19.4% respondents had information about HIV infection from the internet and ranked second was teachers (18%) (Table 1).

The study discovered that 63.9% categorized into having "Satisfactory" knowledge (Table 2). Almost all study respondents (99%) were able to answer correctly the cause of HIV. Regarding the transmission of HIV, 87% answered that it can be transmitted through vaginal discharged and 69% through breast milk. Less than half of study respondent were able to identify symptoms of HIV. All other aspects related to knowledge about HIV are presented in Table 3.

Study result showed that more than half of the respondents had negative attitude (52.5%) towards HIV infection (Table 2). The aspect attitude of respondents shown that 98.4% respondents agreed that promiscuity could increase the risk of contracting HIV/AIDS. Almost all respondents (98.4%) stated that they agreed that injected drug usage could increase risk of contracting HIV/AIDS. More than half of respondents (66.4%) agreed that students who were infected with HIV/AIDS should continue their studies and 78.7% respondents would still be friends with HIV/

Table 1 Sociodemographic Characteristic of Unpad Freshmen Students Year 2016/2017

Subject Characteristics	Frequency (n)	Percentage (%)
Age		
Median, min-max (18, 16-20) years		
Sex		
Male	58	47.5
Female	64	52.5
High School Origin		
Bandung	32	26.2
Outside Bandung	90	73.8
Faculty		
Law	9	7.4
Economics and Business	8	6.6
Medicine	6	4.9
Mathematics and Natural Sciences	15	12.3
Agriculture	8	6.6
Dentistry	4	3.3
Social and Political Sciences	12	9.8
Arts	15	12.3
Psychology	3	2.5
Animal Husbandry	7	5.7
Communication Sciences	12	9.8
Nursing	3	2.5
Fishery and Marine Science	7	5.7
Agricultural Industrial Technology	6	4.9
Pharmacy	3	2.5
Geological Engineering	4	3.3
Source of HIV/AIDS Information		
Teacher	90	18
Parents	40	8
Medical professionals	57	11.4
Friends	65	13
Newspaper	35	7
Magazine	30	6
Television	73	14.6
Radio	13	2.6
Internet	96	19.4

AIDS patients even it was their own close friend (Figure).

Most respondents (96.7%) had good behavior and the rest (3.3%) stated that they

had had sexual intercourse before wither with friend or date (Table 2). No respondents stated that they had sexual intercourse with commercial sex workers, had same sex

Table 2 Knowledge, Attitude, and Practice of Unpad Freshmen Year 2016/2017

Subject Characteristics	Frequency (n)	Percentage (%)
Knowledge		
Good	23	18.9
Satisfactory	78	63.9
Poor	21	17.2
Attitude		
Positive	58	47.5
Negative	64	52.5
Practice		
Good	118	96.7
Bad	4	3.3

intercourse and were injected-drug user.

Discussions

This study revealed that the median age of freshmen is 18 years, this result is similar to a previous study in 2008 at Africa-America by Rose⁶ which stated that the mean age of freshmen students was 18 years. It is known from this study that the distribution of students showed that there were more female than

male students. This could also be observed on a study in 2011 at Gondar by Shiferaw et al.⁵

Most of study participants accessed information about HIV through the internet, just as shown on a study conducted in 2011 at China by Tung et al.⁷ This result could be a consideration in choosing the suitable media to spread information about HIV.

Majority of the respondents had satisfactory knowledge which was similar satisfactory knowledge level was also shown on a study in 2016 at United Arab Emirates which described

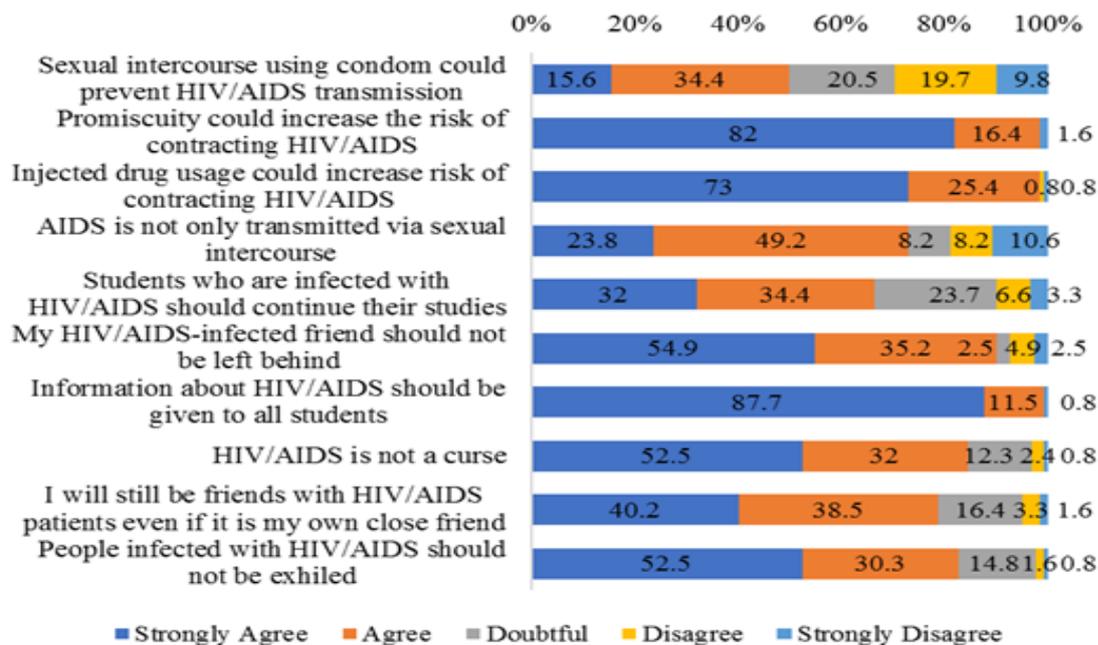


Figure Attitude of Unpad Freshmen towards HIV Year 2016/2017

Table 3 Knowledge about HIV

Knowledge about HIV	Frequency n (%)
HIV is caused by immunodeficiency virus	121 (99%)
Transmission of HIV	
Urine	34 (28%)
Saliva	50 (41%)
Feces	57 (47%)
Tears	77 (64%)
Sweat	72 (59%)
Vaginal discharge	106 (87%)
Breast milk	84 (69%)
Mosquito bite	75 (62%)
Swimming together with HIV patients	83 (68%)
Sneezing/coughing	71 (58%)
Symptoms of HIV	
Flu symptoms for 3-6 weeks	45 (37%)
Chronic diarrhea	35 (29%)
Fever for 10 days	54 (44%)
Fungal infection/ candidiasis on oral cavity, throat, or genital	60 (49%)
Furuncles with red rash	29 (24%)
Frequent headache	35 (29%)
Purplish spots on skin that did not disappear	17 (14%)
Shortness of breath	27 (22%)
Always feel tired	80 (66%)

that the knowledge level about HIV in students were below good.⁸ Most freshmen had known that HIV was the cause of AIDS; more than half of the respondents had known that HIV could be found on breast milk and vaginal discharge, however, poor knowledge of the respondents thought that HIV was present on urine, saliva and feces. In terms of HIV transmission, not many of respondents had known that HIV was not transmitted via mosquito bite, just as found on a study conducted in 2008 at Kazakhstan by Hansson et al.⁹ that more than half of the study respondents had known this fact. Inadequate understanding about early symptoms of HIV could be assessed from 9 questions, more than half of respondents were correct only on the question which stated that easy fatigability was one of the early symptoms of HIV, this result was similar with a previous study in 2011 at Ethiopia by Shiferaw et al.⁵ This result should attract attention; considering that most freshmen got information about HIV

from the internet, it could be assumed that the truthfulness about information from the internet was doubtful.

Knowledge would affect the attitude of someone. This study revealed that more than half of the respondents stated negative attitude towards HIV. This result reflected previous study in 2016 at United Arab Emirates by Haroun et al.⁸ stated that most of students had negative attitude towards HIV especially stigmatization towards People Living with HIV/AIDS (PLHA). There were not many respondents who disagree that sexual intercourse using condom could prevent transmission of HIV/AIDS. This result is similar to a study in 2015 at Ethiopia by Kejela et al.¹⁰ which stated that there were respondents who disagree that condom could transmit HIV. Most respondent had positive opinion that the transmission of HIV is not only occurred via sexual intercourse, but also by having sexual intercourse with multiple

partners and injecting drug. However, more than half of respondents had positive opinion that students with HIV/AIDS infection could continue their education, not to be picked on and would stay friends with them. This result corresponded with a previous study conducted in 2014 at Libreville by Christiane et al.¹¹ which stated that up to half of the respondents would stay friends with HIV patients and stated that HIV patients could continue their studies.

Some of the students stated that they had sexual intercourse with friend or date; similar to a research conducted in 2007 at China by Tan et al.¹² which stated that 37.2% of students had dates and had sex for the first time with their dates. The proportion of male who had sexual intercourse was bigger than female with percentage of 75% and 25% respectively. This pattern could also be found on a study conducted in 2013 at Lao by Thanavanh et al.¹³ which stated that this pattern could occurred because male played a more dominant role in terms of sexual activity. Most of those students who had sexual intercourse before were freshmen from high school originated outside Bandung. As found on a study in 2010 at China by Cai et al.¹⁴ which stated that young people who lived far from their family had a big possibility to be free in having sexual intercourse. However, neither of the respondents admitted having sexual intercourse with commercial sex worker, same sex intercourse or people who inject drugs. The fact that neither of the students admitted the use of injected drug should be noticed in detail because this fact was probably due to the fear of students to be expelled from the university if they answered the question honestly even though data collection were emphasized to be anonymous and students had been assured that only the authors were the sole people who had access to this study.

In terms of methodology, the sample size of this study only represents 2% of total population due to the short time span for the authors to collect data; this was the limitation of this study because probably on the population not present on this data could be a variation that might affect the result of this study considering the minimum sample size for a survey should be 20%. Technically, there were some questions which were considered sensitive, hence it was considered to be ineffective if questionnaire-filling were conducted directly face-to-face with respondents; there could be a higher chance that the respondents would respond honestly if the questionnaires were to be filled online.

It can be concluded that most students have satisfactory knowledge, but still lack of knowledge about HIV transmission and early HIV symptoms; this could affect the attitude of freshmen who mostly have negative attitude towards HIV, how the freshmen should behave to prevent high risk behavior for HIV transmission and stigmatization towards PLHA. It demands an upgrade in knowledge of freshmen about transmission of HIV and the proper behavior to prevent HIV infection and transmission. This preventive measure should have been applied even before continuing higher education in university, i.e. during middle school and high school to reduce the number of HIV cases which are currently increasing. A human touch could be added to support shift of stigmatization towards PLHA.

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